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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 09/643,473
Filing Date: August 22, 2000
Appellant(s): CAHN, ROBERT

Jeffrey M. Weinick
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 6/27/2005.

(1) Real Party in Interest

A statement identifying the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

A statement identifying the related appeals and interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief.

(3) Status of Claims

The statement of the status of the claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Invention

The summary of invention contained in the brief is correct.

(6) Issues

The appellant's statement of the issues in the brief is correct.

(7) Grouping of Claims

The rejection of claims 1-8 stand or fall together because appellant's brief does not include a statement that this grouping of claims does not stand or fall together and reasons in support thereof. See 37 CFR 1.192(c)(7).

(8) Claims Appealed

The copy of the appealed claims contained in the Appendix to the brief is correct.

(9) Prior Art of Record

Callon, Ross, U.S. Patent Number 6,256,295 B1, issued on July 3, 2001, but filed on September 25, 1997.

Bentall et al, U.S. Patent Number 6,282,170 B1, issued on August 28, 2001, but filed on May 29, 1997.

Srinivasan et al, U.S. Patent Number 6,304,549, issued on October 16, 2001, but filed on May 8, 1997.

(10) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claims 1-8 are rejected under 35 U.S.C. 103(a). This rejection is set forth in a prior Office Action, mailed on 1/10/2005.

Claims 1 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Callon, US 6,256,295, in view of "Official Notice".

As per claims 1 and 5, Callon taught the invention substantially as claimed including a method for monitoring the status of a network, comprising:

a. Computing a plurality of measures of network health (col.2, lines 46-60), including unrouted traffic (col.3, lines 1-4, col.5, lines 24-25), traffic whose cost exceeds a prescribed multiple of an optimal route cost (col.3, lines 1-4, 58-67, col.5, lines 11-20), and traffic off an optimal path (col.3, lines 1-4, col.5, lines 3-11) and

b. Comparing said measures of network health to a threshold values and selecting a restoration route from a plurality of stored restoration routes (col.4, lines 13-19, col.5, lines 3-20).

Specifically, as per claim 5, Callon further taught to comprise a database storing possible restoration routes and to select a restoration route from a plurality of stored restoration routes (col.4, lines 13-19, col.5, lines 3-20). Callon did not specifically teach to measure a sum of unrouted traffic, a sum of traffic whose cost exceeds a prescribed multiple of an optimal route cost and a sum of traffic off an optimal path. Official Notice is taken that it would have been obvious to calculate a sum of each category of the determined traffic by simply adding each indication. It would have been obvious to one of ordinary skill in the art at the time the invention was made to include the calculation of summing the detected unrouted traffic, traffic whose cost exceeds a prescribed multiple of an optimal route cost and traffic that are off an optimal path in Callon's method in order to determine the total number of traffic of each detection.

Claims 2 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Callon as applied to claims 1 and 5 above, and further in view of Bentall et al (hereinafter Bentall), US 6,282,170. As per claims 2 and 6, Callon taught the invention substantially as claimed in claims 1 and 5. Callon did not specifically teach to restore circuits at a rate parameterized by a value P and observe the behavior of the network; and increase the value P in the network to decrease the time customers experience unrouted traffic. Bentall taught a route restoration method that the speed for restoring circuits can be adjusted (col.3, lines 37-41, col.4, lines 29-34). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the

teachings of Callon and Bentall because Bentall's teaching of adjusting the rate of route restoration help to speed up or slow down the restoration process in Callon's method according to the available capacity (col.2, lines 29-34).

Claims 3-4 and 7-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Callon as applied to claims 1 and 5 above, and further in view of Srinivasan et al (hereinafter Srinivasan), US 6,304,549.

As per claims 3 and 7, Callon taught the invention substantially as claimed in claims 1 and 5. Callon did not specifically teach to monitor said measures to sense when bandwidth needs to be added to the network. Srinivasan taught to monitor said measures to sense when bandwidth needs to be added to the network (col.15, lines 55-64). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Callon and Srinivasan because Srinivasan's teaching of adjust bandwidth helps Callon's method to increase or decrease bandwidth according to the needs.

As per claims 4 and 8, Callon taught the invention substantially as claimed in claims 1 and 5. Callon further taught to compute said plurality of measures of network health to identify unrouted, off optimal and seriously misrouted traffic (col.2, lines 46-60, col.3, lines 1-4, 58-67, col.5, lines 3-20, 24-25). Callon did not specifically teach to derate each edge of the network to have capacity of a predetermined fraction of real capacity; and to determine if the measures are over a specified value and if so, then adding capacity to the network. Srinivasan taught to derate each edge of the network to have capacity of predetermined fraction of real capacity (col.15, lines 43-50, reduce the allocated bandwidth where the allocated bandwidth is the real capacity);

and to determine if the measures are over a specified value and if so, then adding capacity to the network (col.15, lines 55-58). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Callon and Srinivasan because Srinivasan's teaching of adjust bandwidth capacity helps Callon's method to increase or decrease bandwidth according to a value of a predetermined method.

(11) Response to Argument

The examiner summarizes the various points raised by the appellant and addresses replies individually.

As per appellant's argued that:

(1) Callon does not disclose any computations of "a sum of unrouted traffic", "a sum of traffic whose cost exceeds a prescribed multiple of an optimal route cost", " traffic off an optimal path" as defined in the specification. Official Notice taken by the examiner and the statement that such Official Notice has been admitted are both improper.

In Reply to argument (1): In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., One claimed measurement is "a sum of unrouted traffic" which is a measure of network traffic which cannot be routed to its destination. Traffic may be unrouted, for example, if the path between the source and the destination has failed or if the path between the source and the destination is too congested to carry the traffic (i.e., the links are saturated). Another claimed measurement is "a sum of traffic whose cost exceeds a prescribed multiple of an optimal route cost". In one embodiment, this measure of network health is described in the specification as the

computation of "seriously misrouted traffic" whereby the ratio of cost between the shortest route and the actual route is determined. In the embodiment described in the application, if the ratio is greater than 1.5 then the traffic is considered to be seriously misrouted. If the ratio is less than 1.5, then the traffic is considered to be off the optimal traffic path, which is the another claimed measure of "a sum of traffic off an optimal path") are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Since the claims do not clearly defined that "unrouted traffic", "traffic whose cost exceeds a prescribed multiple of an optimal route cost" and "traffic off an optimal path" to be according to the definitions defined the appellant's disclosure, there are hence rejected according to the broadest interpretations determined by the examiner.

Callon taught to monitor the status of a network by computing a plurality of measures of network health (col.2, lines 46-60; e.g. methods and computations for determining multiple non-overlapping or minimally-overlapping path are described). In order to perform determination, monitoring of the network health is required, thus, determination step incorporates monitoring of the network. Callon further taught the computation of the network health including computation of unrouted traffic (col.3, lines 1-4, col.5, lines 24-25; e.g. unreachable traffic path including PVC; determining which paths are unreachable), traffic whose cost exceeds a prescribed multiple of an optimal route cost (col.3, lines 1-4, 58-67, col.5, lines 11-20; computing the total cost of a path and determine it with a distinct cost of another path), and traffic off an optimal path (col.3, lines 1-4, col.5, lines 3-20; computing the total cost of a path and determine it with a distinct cost

of another path) and comparing said measures of network health to a threshold values and selecting a restoration route from a plurality of stored restoration routes (col.4, lines 13-19, col.5, lines 3-20). Callon did not specifically teach to measure a sum of unrouted traffic, a sum of traffic whose cost exceeds a prescribed multiple of an optimal route cost and a sum of traffic off an optimal path. Official Notice is taken that it would have been obvious to calculate a sum of each category of the determined traffic by simply adding each indication. It would have been obvious to one of ordinary skill in the art at the time the invention was made to include the calculation of summing the detected unrouted traffic, traffic whose cost exceeds a prescribed multiple of an optimal route cost and traffic that are off an optimal path in Callon's method in order to determine the total number of traffic of each detection.

Examiner states that the Official Notice taken in regarding the calculation of a sum was proper and was based on common knowledge known in the art. Since Callon taught to identified various types of network health measurements such as unrouted traffic, the total number of a same identified type identified during the measurement can be easily added up to present a sum of such identification. This is simply a question of how many in total are identified by Callon's computing regarding an identification of a particular measure.

Examiner further states that the appellant did not properly challenge the examiner's Official Notice in the response to the previous office action in accordance with MPEP 2144.03. The appellant only argued against obviousness and did not request or challenge the examiner to provide factual evidence for the Official Notice taken. In fact, appellant did not even argue upon the Official Notice in the previous argument but solely on Callon reference.

For the purpose of appeal and clarification, if the appellant further argued that the Official Notice was improperly taken since it is not obvious to calculate the sum of the network health measurements, examiner here provides factual evidence in showing support of the Official Notice taken.

Grover et al, U.S. Patent Number 6,819,662 B1, published on November 16, 2004 but filed on April 28, 2000, disclosed the measurement of the total of the unrouted link of the route in column 10, lines 17-20.

Friederich et al, U.S. Patent Number 6,249,742 B1, published on June 19, 2001 but filed on June 20, 2000 with an effective filing date of August 3, 1999, disclosed to calculate the total distance included in all the alternative paths in column 20, lines 35-38 and 50-54.

(2) Bentall fails to provide the missing disclosure of "restoring circuits by a particular rate parameterized by a value P" and "increasing the value P in the network to decrease the time customers experience unrouted traffic".

In Reply to argument (2), Bentall taught a route restoration method that the speed for restoring circuits can be adjusted (e.g. increase or decrease; col.3, lines 37-41, col.4, lines 29-34). It is known that by adjusting the speed of the restoring circuits, the rate of the restoring can be controlled. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Callon and Bentall because Bentall's teaching of adjusting the rate of route restoration help to speed up or slow down the restoration process in Callon's method according to the available capacity (col.2, lines 29-34). Furthermore, since it is

not clearly defined in the claim language, it can be interpreted that the rate parameterized by the value P is equal to zero causing the restoration to restore circuits at a fixed speed.

(3) There is no disclosure in the cited art of using the particular measures, the measures relates back to the plurality of measure from claims 1 and 5, to send when additional bandwidth is necessary.

In Reply to argument (3), in response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). Callon taught to compute a plurality of measures claimed in claims 1 and 5. Callon did not specifically teach to monitor said measures to sense when bandwidth needs to be added to the network. Srinivasan taught to monitor said measures to sense when bandwidth needs to be added to the network (col.15, lines 55-64). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Callon and Srinivasan because Srinivasan's teaching of adjust bandwidth helps Callon's method to increase or decrease bandwidth according to the needs.

(4) Lowering the assigned bandwidth is not the same as "derating each edge of the network to have capacity of a predetermined fraction of real capacity."

In Reply to argument (4), Lowering the assigned bandwidth reads on the claimed language "derating each edge of the network to have capacity of a predetermined fraction of real

capacity" since lowering the bandwidth to a fraction of the whole assigned bandwidth is decreasing the capacity of the edges of the network. Srinivasan taught to derate each edge of the network to have capacity of predetermined fraction of real capacity (col.15, lines 43-50, reduce the allocated bandwidth where the allocated bandwidth is the real capacity) and to determine if the measures are over a specified value and if so, then adding capacity to the network (col.15, lines 55-58). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Callon and Srinivasan because Srinivasan's teaching of adjust bandwidth capacity helps Callon's method to increase or decrease bandwidth according to a value of a predetermined method.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

KL

ksl
September 8, 2005

Conferees

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